

What Is Claimed Is:

1 1. A liquid crystal display device, comprising:
2 a first substrate;
3 an organic electroluminescent display (OLED) element
4 formed on the first substrate;
5 a transparent protective layer formed on the OLED element;
6 a common electrode formed on the transparent protective
7 layer;
8 a second substrate opposing the first substrate, wherein
9 the second substrate has a pixel electrode thereon; and
10 a liquid crystal layer interposed between the first
11 substrate and the second substrate.

1 2. The liquid crystal display device according to claim
2 1, wherein the OLED element comprises:
3 a cathode formed on the first substrate;
4 an organic emitting layer formed on the cathode; and
5 an anode formed on the organic emitting layer.

1 3. The liquid crystal display device according to claim
2 1, wherein the liquid crystal layer is a cholesteric liquid
3 crystal layer.

1 4. The liquid crystal display device according to claim
2 2, wherein the cathode is a metal layer.

1 5. The liquid crystal display device according to claim
2 2, wherein the anode is transparent.

1 6. The liquid crystal display device according to claim
2 1, wherein the transparent protective layer is a silicon nitride
3 (SiN_x) layer.

1 7. The liquid crystal display device according to claim
2 1, wherein the transparent protective layer is a moisture
3 blocking layer.

1 8. The liquid crystal display device according to claim
2 1, wherein the common electrode is an ITO (indium tin oxide) or
3 IZO (indium zinc oxide) layer.

1 9. A liquid crystal display device, comprising:
2 a first substrate;
3 an organic electroluminescent display (OLED) element
4 formed on the first substrate;
5 a transparent protective layer formed on the OLED element;
6 a common electrode formed on the transparent protective
7 layer;
8 a first polarizer formed on the common electrode;
9 a second substrate opposing the first substrate;
10 a pixel electrode formed on an inner side of the second
11 substrate;
12 a second polarizer formed on an outer side of the second
13 substrate; and
14 a liquid crystal layer interposed between the first
15 substrate and the second substrate.

1 10. The liquid crystal display device according to claim
2 9, wherein the first polarizer is a wire grid polarizer or a thin
3 film polarizer.

1 11. The liquid crystal display device according to claim
2 9, further comprising:

3 a first alignment film formed on the first polarizer; and
4 a second alignment film formed on the pixel electrode.

1 12. The liquid crystal display device according to claim
2 9, wherein the OLED element comprises:

3 a cathode formed on the first substrate;
4 an organic emitting layer formed on the cathode; and
5 an anode formed on the organic emitting layer.

1 13. The liquid crystal display device according to claim
2 12, wherein the cathode is a metal layer.

1 14. The liquid crystal display device according to claim
2 12, wherein the anode is transparent.

1 15. The liquid crystal display device according to claim
2 9, wherein the transparent protective layer is a silicon nitride
3 (SiN_x) layer.

1 16. The liquid crystal display device according to claim
2 9, wherein the transparent protective layer is a moisture
3 blocking layer.

1 17. The liquid crystal display device according to claim
2 9, wherein the common electrode is an ITO (indium tin oxide) or
3 IZO (indium zinc oxide) layer.

1 18. The liquid crystal display device according to claim
2 10, wherein when the first polarizer is the wire grid polarizer,
3 the wire grid polarizer comprises:

4 a transparent layer formed on the common electrode; and
5 a metal strip pattern formed on the transparent layer.

1 19. The liquid crystal display device according to claim
2 10, wherein when the first polarizer is the thin film polarizer,
3 the thin film polarizer is an E-type polarizer.

1 20. The liquid crystal display device according to claim
2 9, wherein the common electrode is an ITO (indium tin oxide) or
3 IZO (indium zinc oxide) layer.

1 21. The liquid crystal display device according to claim
2 12, wherein when the first polarizer is the wire grid polarizer,
3 the liquid crystal display device further comprises:

4 a reflective layer formed on the first substrate; and
5 a retardation film formed on the reflective layer;
6 wherein the cathode is semitransparent.

1 22. A liquid crystal display device, comprising:

2 a first substrate;

3 an organic electroluminescent display (OLED) element
4 formed on the first substrate;

5 a transparent protective layer formed on the OLED element;

6 a first polarizer formed on the transparent protective
7 layer, wherein the first polarizer is a wire grid polarizer;

8 a second substrate opposing the first substrate;

9 a pixel electrode formed on an inner side of the second
10 substrate;

11 a second polarizer formed on an outer side of the second
12 substrate; and

13 a liquid crystal layer interposed between the first
14 substrate and the second substrate.

1 23. The liquid crystal display device according to claim
2 22, wherein the wire grid polarizer serves as a common electrode.

1 24. The liquid crystal display device according to claim
2 22, further comprising:

3 a first alignment film formed on the first polarizer; and
4 a second alignment film formed on the pixel electrode.

1 25. The liquid crystal display device according to claim
2 22, wherein the OLED element comprises:

3 a cathode formed on the first substrate;
4 an organic emitting layer formed on the cathode; and
5 an anode formed on the organic emitting layer.

1 26. The liquid crystal display device according to claim
2 25, further comprising:

3 a reflective layer formed on the first substrate; and
4 a retardation film formed on the reflective layer;
5 wherein the cathode is semitransparent.

1 27. The liquid crystal display device according to claim
2 26, wherein the cathode is a metal layer.

1 28. The liquid crystal display device according to claim
2 26, wherein the anode is transparent.

1 29. The liquid crystal display device according to claim
2 22, wherein the transparent protective layer is a silicon
3 nitride (SiN_x) layer.

1 30. The liquid crystal display device according to claim
2 22, wherein the transparent protective layer is a moisture
3 blocking layer.

1 31. The liquid crystal display device according to claim
2 22, wherein the wire grid polarizer comprises:
3 a transparent layer formed on the common electrode; and
4 a metal strip pattern formed on the transparent layer.

1 32. The liquid crystal display device according to claim
2 22, wherein the common electrode is an ITO (indium tin oxide)
3 or IZO (indium zinc oxide) layer.

1 33. A liquid crystal display device suitable for an IPS
2 (In-Plane Switching) mode liquid crystal display device,
3 comprising:
4 a first substrate;
5 an organic electroluminescent display (OLED) element
6 formed on the first substrate;
7 a transparent protective layer formed on the OLED element;
8 a first polarizer formed on the transparent protective
9 layer;
10 a second substrate opposing the first substrate;
11 an electrode pattern formed on an inner side of the second
12 substrate, wherein the electrode pattern provides an electric
13 field parallel to the first and second substrates;
14 a second polarizer formed on an outer side of the second
15 substrate; and
16 a liquid crystal layer interposed between the first
17 substrate and the second substrate.

1 34. The liquid crystal display device according to claim
2 33, wherein the first polarizer is a thin film polarizer.

1 35. The liquid crystal display device according to claim
2 33, further comprising:

3 a first alignment film formed on the first polarizer; and
4 a second alignment film formed on the electrode pattern.

1 36. The liquid crystal display device according to claim
2 33, wherein the OLED element comprises:

3 a cathode formed on the first substrate;
4 an organic emitting layer formed on the cathode; and
5 an anode formed on the organic emitting layer.

1 37. The liquid crystal display device according to claim
2 36, wherein the cathode is a metal layer.

1 38. The liquid crystal display device according to claim
2 36, wherein the anode is transparent.

1 39. The liquid crystal display device according to claim
2 33, wherein the transparent protective layer is a silicon
3 nitride (SiN_x) layer.

1 40. The liquid crystal display device according to claim
2 33, wherein the transparent protective layer is a moisture
3 blocking layer.

1 41. The liquid crystal display device according to claim
2 34, wherein the thin film polarizer is an E-type polarizer.